



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,511	10/17/2003	John J. Roese	ENI-035	1999
35557	7590	08/21/2007		
CHRIS A. CASEIRO VERRILL DANA, LLP ONE PORTLAND SQUARE PORTLAND, ME 04112-0586			EXAMINER CHEN, SHIN HON	
			ART UNIT 2131	PAPER NUMBER
			MAIL DATE 08/21/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/688,511

Applicant(s)

ROESE, JOHN J.

Examiner

Shin-Hon Chen

Art Unit

2131

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 June 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 14-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 14-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-11 and 14-20 have been examined.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-11 and 14-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over IEEE Standard "Port-Based Network Access Control" (hereinafter IEEE) in view of Juitt et al. U.S. Pat. No. 7042988 (hereinafter Juitt).

4. As per claim 1, IEEE discloses a method of authenticating an attached function for the purpose of permitting access by the attached function to a network services associated with a network infrastructure including a network entry device including an IEEE 802.1X Port Access Entity (PAE), the method comprising the steps of:

- a. Configuring the network entry device to recognize authentication signals received from an attached function (IEEE: page 11 figure 6.5: the authenticator system communicate with supplicant using EAPOL protocol through uncontrolled port) ;
- b. Receiving at the network entry device from the attached function one or more signal packets (IEEE: page 11 figure 6.5: communication of signals);

Art Unit: 2131

- c. Prior to authenticating of the attached function, holding or discarding at the network entry device any non-authenticating signals of the one or more signal packets (IEEE: page 9 figure 6.2: the effect of authorization on controlled ports);
- d. Forwarding by the network entry device only signal packets from the attached function including authentication information to the another network infrastructure device for authentication (IEEE: page 11 figure 6.5: authentication server system); and
- e. Forwarding non-authenticating signals from the attached function through the network entry device only after authentication of the attached function by the PAE (IEEE: page 9 figure 6.2: forwarding allowed after successful authentication).

IEEE does not disclose the network entry device is not configured to operate as a PAE authenticator. However, Juitt discloses a gateway device for performing authentication process for wireless access points (Juitt: column 2 lines 44-52 and figure 1A: gateway server provides security function in communication with external authentication service; column 3 lines 11-16: forward authentication request to gateway server from wireless access points; column 7 lines 36-39: gateway server is access point agnostic...protocols of any type between client and server can be used for the gateway server; column 6 line 41: 802.1X). It would have been obvious to one having ordinary skill in the art to allow the gateway server to serve as network infrastructure device/PAE authenticator for plurality of wireless access points that do not have PAE functionality because both prior art disclose analogous art toward security in wireless LAN that support 802.1X functionality (Juitt: column 2 line 56-57). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Juitt within the system of IEEE because it allows the use of simple and inexpensive

Art Unit: 2131

access point that are not required to perform sophisticated security functions (Juitt: column 2 lines 51-52).

5. As per claim 2, IEEE as modified discloses the method of claim 1. IEEE as modified further discloses the method comprising the step of making the forwarding of non-authenticating signals is carried out in OSI layer 2 bridging (IEEE: page 1 1.1: 802.1D standard).

6. As per claim 3, IEEE as modified discloses the method of claim 2. IEEE as modified further discloses the method further comprises the step of examining the signal packets for a reserved Media Access Control address and/or Ethernet Type (IEEE: page 10 figure 6.3: MAC enable/disable state).

7. As per claim 4, IEEE as modified discloses the method of claim 1. IEEE as modified further discloses

8. As per claim 5, IEEE as modified discloses the method of claim 1. IEEE as modified further discloses wherein the network infrastructure includes a plurality of network entry devices, each configured to recognize authentication signals to be received from an attached function, and not to operate as a PAE authenticator, the method further comprising the step of maintaining state for one or more sessions associated with the plurality of network entry devices (IEEE: page 64 9.4.4: session statistics).

Art Unit: 2131

9. As per claim 6, IEEE as modified discloses the method of claim 5. IEEE as modified further discloses wherein the step of maintaining state is performed by a tracking function of one or more devices of the network infrastructure devices including the plurality of network entry devices and the another network infrastructure device (IEEE: page 64 9.4.4: maintain current session statistics).

10. As per claim 7, IEEE as modified discloses the method of claim 1. IEEE as modified further discloses the method comprises the steps of recognizing through a tracking function of the network infrastructure authentication success messages and enabling a change of state associated with a forwarding function of the network entry device (IEEE: page 28 figure 8.1: port authorized upon authentication success).

11. As per claim 8, IEEE as modified discloses the method of claim 7. IEEE as modified further discloses wherein the tracking function forms part of the network entry device (IEEE: page 11 figure 6.4: determine if access is authorized).

12. As per claim 9, IEEE discloses a system to authenticate an attached function for the purpose of permitting access by the attached function to network services associated with a network infrastructure, the system comprising:

- a. a network entry device including relay function configured to receive and forward only authentication signals from the attached function from the attached function and to hold or discard any non-authenticating signals received until after the attached function

Art Unit: 2131

has been authenticated (IEEE: page 11 figure 6.5: the authenticator system communicate with supplicant using EAPOL protocol through uncontrolled port; page 9 figure 6.2: the effect of authorization on controlled ports); and

b. another network infrastructure device configured to receive from the network entry device the forwarded authentication signals for authentication of the attached function before permitting the network entry device, through the relay function, to forward non-authenticating signals from the attached function (IEEE: page 11 figure 6.5: authentication server system).

IEEE does not disclose the network entry device is not configured to operate as a PAE authenticator. However, Juitt discloses a gateway device for performing authentication process for wireless access points (Juitt: column 2 lines 44-52 and figure 1A: gateway server provides security function in communication with external authentication service; column 3 lines 11-16: forward authentication request to gateway server from wireless access points; column 7 lines 36-39: gateway server is access point agnostic...protocols of any type between client and server can be used for the gateway server; column 6 line 41: 802.1X). It would have been obvious to one having ordinary skill in the art to allow the gateway server to serve as network infrastructure device/PAE authenticator for plurality of wireless access points that do not have PAE functionality because both prior art disclose analogous art toward security in wireless LAN that support 802.1X functionality (Juitt: column 2 line 56-57). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the teachings of Juitt within the system of IEEE because it allows the use of simple and inexpensive

Art Unit: 2131

access point that are not required to perform sophisticated security functions' (Juitt: column 2 lines 51-52).

13. As per claim 10, IEEE as modified discloses the system of claim 9. IEEE as modified further discloses wherein the relay function forwards the non-authenticating signals in a manner compatible with IEEE standard 802.1D or 802.1Q (IEEE: page 1 1.1: 802.1D standard).

14. As per claim 11, IEEE as modified discloses the system of claim 9. IEEE as modified further discloses wherein the relay function is configured to recognize authentication signals for a reserved Media Access Control address and/or an Ethernet type (IEEE: page 10 figure 6.3: MAC enable/disable state).

15. As per claim 14, IEEE as modified discloses the system of claim 9. IEEE as modified further discloses the method comprises a tracking function to monitor authentication messages and to enable a change of state associated with a forwarding function of the network entry device (IEEE: page 28 figure 8.1: port authorized upon authentication success).

16. As per claim 15, IEEE discloses a method of authenticating an attached function for the purpose of permitting access by the attached function to network services associated with a network infrastructure including a network entry device and another network infrastructure device, the another network infrastructure device including attached function authentication functionality, the method comprising the steps of:

Art Unit: 2131

- a. configuring the network entry device to recognize authentication signals received from an attached function (IEEE: page 11 figure 6.5: the authenticator system communicate with supplicant using EAPOL protocol through uncontrolled port);
- b. forwarding by the network entry device only signal packets including authentication information to the another network infrastructure device for authentication (IEEE: page 11 figure 6.5: authentication server system); and
- f. c. forwarding non-authenticating signals from the attached function through the network entry device only after authentication of the attached function by the another network infrastructure device (IEEE: page 9 figure 6.2: forwarding allowed after successful authentication).

IEEE does not disclose the network entry device is not configured to operate as a PAE authenticator. However, Juitt discloses a gateway device for performing authentication process for wireless access points (Juitt: column 2 lines 44-52 and figure 1A: gateway server provides security function in communication with external authentication service; column 3 lines 11-16: forward authentication request to gateway server from wireless access points; column 7 lines 36-39: gateway server is access point agnostic...protocols of any type between client and server can be used for the gateway server; column 6 line 41: 802.1X). It would have been obvious to one having ordinary skill in the art to allow the gateway server to serve as network infrastructure device/PAE authenticator for plurality of wireless access points that do not have PAE functionality because both prior art disclose analogous art toward security in wireless LAN that support 802.1X functionality (Juitt: column 2 line 56-57). Therefore, it would have been obvious to one having ordinary skill in the art at the time of applicant's invention to combine the

Art Unit: 2131

teachings of Juitt within the system of IEEE because it allows the use of simple and inexpensive access point that are not required to perform sophisticated security functions (Juitt: column 2 lines 51-52).

17. As per claim 16, IEEE as modified discloses the method of claim 15. IEEE as modified further discloses the method comprises the step of forcing re-authentication of the attached function upon loss of signal packet exchange with the network device (IEEE: page 26 8.4.5: retransmission of EAP upon loss of packet).

18. As per claim 17, IEEE as modified discloses the method of claim 15. IEEE as modified further discloses wherein the authentication functionality of the another network infrastructure device is an IEEE 802.1X Port access entity (Juitt: column 2 lines 44-52 and figure 1A: gateway server provides security function in communication with external authentication service; column 3 lines 11-16: forward authentication request to gateway server from wireless access points; column 7 lines 36-39: gateway server is access point agnostic...protocols of any type between client and server can be used for the gateway server; column 6 line 41: 802.1X).

19. As per claim 18, IEEE as modified discloses the method of claim 15. IEEE as modified further discloses the method comprises the steps of recognizing through a tracking function of the network infrastructure authentication success messages and enabling a change of state associated with a forwarding function of the network entry device (IEEE: page 28 figure 8.1: port authorized upon authentication success).

Art Unit: 2131

20. As per claim 19, IEEE as modified discloses the method of claim 15. IEEE as modified further discloses the step of transferring one or more signal packets through the network entry device in a format compatible with IEEE standard 802.1D or 802.1Q (IEEE: page 1 1.1: 802.1D standard).

21. As per claim 20, IEEE as modified discloses the method of claim 18. IEEE as modified further discloses wherein the authentication information includes an Extensible Authentication Protocol message (IEEE: page 10 Note: communication would typically be achieved by means of EAP connection).

Response to Arguments

22. Applicant's arguments filed on 6/13/07 have been fully considered but they are not persuasive.

Regarding applicant's remarks, applicant argues that combination of Juitt network entry devices are not PAE authenticators and they do not serve to bar non-authenticating signals until after authentication. However, the examiner has cited the IEEE standard to discloses the PAE functionalities of an access point such that when it is connected to a authentication server, it becomes the PAE authenticator, while the examiner agreed that would make the access point an PAE authenticator device, the examiner cited Juitt reference to disclose that the access points can be coupled to a gateway device (i.e. not authentication server) to act as a central PAE device for the access points so that original functionalities of the PAE can still be used without being the

Art Unit: 2131

PAE authenticator (Juitt: figure 7). Therefore, it would have been obvious to one having ordinary skill in the art to combine the teachings of Juitt within the IEEE standard so that authenticator functionality of PAE is centralized.

Conclusion

23. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shin-Hon Chen whose telephone number is (571) 272-3789. The examiner can normally be reached on Monday through Friday 8:30am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2131

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shin-Hon Chen
Examiner
Art Unit 2131

SC


SYED A. ZIA
PRIMARY EXAMINER

8/12/2017